

WHAT IS CLAIMED IS:

1. A transmission power control method performing a broad-band spread transmission by using a receiver,
5 and comprising the steps of:

detecting a reception error rate of a received signal;

comparing the detected reception error rate and a predetermined target reception error rate;

- 10 correcting the ratio between the target received signal power value and the interference power value, or a target reception power value based on the result of the comparison; and

settling a transmission control signal so that
15 the transmission power can be controlled to a predetermined target value, based on the corrected ratio between the target received signal power value and the interference power value, or based on the target reception power value.

20

2. The transmission power control method of claim 1, wherein said correcting process comprising:

varying the amount of correction of the ratio between the target received signal power value and the
25 interference power value, or the amount of correction of the target reception power value, according to the difference between the detected reception error rate

and the target reception error rate.

3. The transmission power control method of claim 1 or 2, further comprising:

5 when performing a site diversity reception for synthesizing the received signal at a higher hierarchy station after receiving transmitted signals at a plurality of stations,

generating a synthesized signal by synthesizing
10 the received signal by a site diversity;

detecting a reception error rate of the synthesized signal;

comparing the detected synthesized reception error rate and the predetermined set target
15 synthesized reception error rate;

correcting the target reception error rate at each station based on the result of the comparison;
and

setting the transmission control signal so that
20 the transmission power can be controlled to a predetermined target value based on the corrected target reception error rate at each station.

4. The transmission power control method of claim
25 3, wherein, said correcting process comprising:

varying the correction amount of the target reception error rate at each station, according to the

difference between the detected synthesized reception error rate and the target synthesized reception error rate.

5 5. A mobile communication system controlling transmission power of a transmitting signal between a base station and a mobile station by a wide-band spread transmission,

and the system comprising:

10 a detection means for detecting a reception error rate of a received signal from the mobile station;

a comparison means for comparing the detected reception error rate and a predetermined target reception error rate;

15 a correction means for correcting the ratio between the target received signal power value and the interference power value, or the target reception power based on the result of the comparison;

a control means for setting a transmission
20 control signal so that the transmission power of the mobile station can be controlled to a predetermined target value, based on the corrected ratio between the target received signal power value and the interference power value, or based on the target
25 reception power value;

a transmission means for transmitting the set control signal to the base station; and

a transmission power control means for analyzing the received control signal from the base station, and controlling the transmission power based on the result of the analysis.

5

6. The mobile communication system of claim 5, wherein the correction means comprising:

10 varying the amount of correction of the ratio between the target received signal power and the interference power value, or the amount of correction of the target reception power value, according to the difference between the detected reception error rate and the target reception error rate.

15 7. The mobile communication system of claim 5 or 6, further comprising:

20 when performing a sit diversity reception for synthesizing the received signal at a higher hierarchy station after receiving transmitted signals at a plurality of stations,

a generation means for generating a synthesized signal by synthesizing the received signal by the site diversity;

25 a detection means for detecting a reception error rate of the synthesized signal;

a comparison means for comparing the detected synthesized reception error rate and the predetermined

set target synthesized reception error rate;

a correction means for correcting the target reception error rate at each station based on the result of the comparison; and

5 a control means for setting the transmission control signal so that the transmission power can be controlled to a predetermined target value based on the corrected target reception error rate at each station.

10

8. The mobile communication system of claim 7, wherein, said correction means comprising:

15 varying the correction amount of the target reception error rate at each station, according to the difference between the detected synthesized reception error rate signal and the target synthesized reception error rate signal.

9. A base station controlling transmission power of a transmitting signal from a mobile station by a wide-band spread transmission,

20 and the base station comprising:

a defection means for detecting a reception error rate of a received signal;

25 a comparison means for comparing the detected reception error rate and a predetermined target reception error rate;

a correction means for correcting the ratio between the target received signal power value and the interference power value, or the target reception power based on the result of the comparison;

5 a control means for setting a transmission control signal so that the transmission power of the mobile station can be controlled to a predetermined target value, based on the corrected ratio between the target received signal power value and the
10 interference power value, or based on the target reception power value; and

a transmission means for transmitting the set control signal to the base station.

15 10. A mobile station controlling transmission power of a transmitting signal from a base station by a wide-band transmission, and the mobile station comprising:

a control signal outputted from the base station
20 of claim 9;

an extract means for analyzing the outputted control signal transmitted from the base station and extracting a transmission power control information included in the control signal; and

25 a transmission power control means for controlling the transmission power so that the transmission power can be controlled to a

predetermined target value based on the extracted
transmission power control information.

090945Z FEB 94